



DOCKET NO. SILO-0005

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Yaw S. Obeng, *et al.*

Serial No.: 10/000,101

Filed: October 24, 2001

For: THE SELECTIVE CHEMICAL-MECHANICAL POLISHING PROPERTIES
OF A CROSS-LINKED POLYMER AND SPECIFIC APPLICATIONS
THEREFOR

Group No.: 3723

Examiner: Ojini, Anthony E.

Commissioner of Patents
and Trademarks
Washington, D. C. 20231

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on 4-13-2004

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(Signature of Person Depositing)

Elizabeth Schumaker

(Printed Name of Person Depositing)

Sir:

DECLARATION OF YAW S. OBENG
IN ACCORDANCE WITH 37 C.F.R. § 1.132

The undersigned, Yaw S. Obeng, a United States citizen having an address of 272 Lytton
Circle, Orlando, Florida 32824 declares the following:

1. I am a graduate of the University of Science and Technology, Kumasi, Ghana , with a Bachelors of Science degree in Chemistry; and a graduate of the University of Miami, Florida, U.S.A., with a Doctor of Philosophy Degree in Chemistry.

2. I am presently employed by PSILOQUEST, Inc. and have been engaged in the design and development of products and processes in the Chemical Mechanical Polishing industry for about eight years.

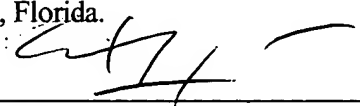
3. I am an inventor of the present application, have read and understand the Examiner's Action mailed January 21, 2004, and would like to clarify issues raised by the Examiner in the Action regarding the properties of polyurethane during CMP.

4. It is well known to those skilled in the pertinent art that during CMP, polyurethane-based pads continuously decompose with consequent changes in their physical properties. For instance, Tregub *et al.* (Mater. Res. Soc. Symposium Proceedings, 767:101-110, 2003) report that during a traditional CMP process, a polyurethane-based pad's properties can be substantially and irreversibly changed as the result of slurry/rinse water absorption. Luet *et al.* (Material Characterization, 49:35-44, 2002) demonstrated that a used polyurethane pad had alterations in surface pore geometry and roughness, as compared to new polyurethane pads. Lu *et al.* (Material Characterization, 49:177-186, 2003) showed that the dynamic modulli of polyurethane pad are substantially altered after CMP. It follows therefore that newly made polyurethane-based polishing pads will bear little to no resemblance to the hardness of the pad during polishing.

5. The undersigned declares that all statements made herein of his own knowledge are true, and all statements made on information are believed to be true; and furthermore, that the statements were

made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful, false statements may jeopardize the validity of the application or any patent issuing thereon.

Executed this 4 day of April, at Orlando, Florida.



Yaw S. Obeng, Ph.D.